

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-19 (Canceled).

Claim 20 (New): An electrostatic actuation device, comprising:

a flexible electrode, having a first and a second end, at least part of the flexible electrode being mobile, or forming a mobile structure, relative to a substrate;

first and second fixed electrodes, fixed relative to the substrate; and

means for forming two pivots of the flexible electrode, located between the first and second ends of the flexible electrode, each fixed electrode being located, while the device is operating, opposite a section of the flexible electrode located between one of the means for forming two pivots and the end of the flexible electrode closest to the means for forming two pivots.

Claim 21 (New): The device as claimed in claim 20, wherein a load is placed on or fixed to the flexible electrode, between its first and second ends or between the means for forming two pivots.

Claim 22 (New): The device as claimed in claim 20, wherein the load is a mechanical load, and/or an electrical contact, and/or an electrical or optical component.

Claim 23 (New): The device as claimed in claim 20, wherein the flexible electrode is connected via a block to a membrane.

Claim 24 (New): The device as claimed in claim 23, wherein the membrane forms a mirror or wave front corrector.

Claim 25 (New): The device as claimed in claim 20, wherein the mobile part of the mobile electrode is mobile according to at least the direction perpendicular to the substrate.

Claim 26 (New): The device as claimed in claim 20, further comprising an insulating layer formed on the substrate and/or the flexible electrode.

Claim 27 (New): The device as claimed in claim 20, wherein the means for forming two pivots comprises at least one block fixed relative to the substrate.

Claim 28 (New): The device as claimed in claim 27, wherein each block has a rounded end.

Claim 29 (New): The device as claimed in claim 20, wherein the means for forming two pivots comprises at least one arm positioned laterally relative to the flexible electrode, or two arms positioned on either side of the flexible electrode.

Claim 30 (New): The device as claimed in claim 20, further comprising control means for each potential difference between the flexible electrode and each fixed electrode.

Claim 31 (New): A method for producing an electrostatic actuation device, comprising:

forming, on a first substrate, a first part including a flexible electrode, having a first and a second end;

forming, in a second substrate, a second part including a substrate, two electrodes, fixed relative to the substrate, and means for forming two pivots of the flexible electrode; and assembling or putting in contact the first and second parts, at least part of the flexible electrode being, after assembly, mobile relative to the substrate of the second part, the means for forming two pivots of the flexible electrode being located between the first and second ends of the flexible electrode, each fixed electrode being located, while the device is operating, opposite a section of the flexible electrode located between one of the means for forming two pivots and the end of the flexible electrode closest to the means for forming a pivot.

Claim 32 (New): The method as claimed in claim 31, further comprising forming a dielectric layer on the mobile electrode.

Claim 33 (New): The method as claimed in claim 31, further comprising forming a dielectric layer on at least the two fixed electrodes and the means for forming a pivot.

Claim 34 (New): A method for producing a deformable membrane, comprising:
producing an electrostatic actuation device, as claimed in claim 31; and,
forming a membrane, and fixing means to fix the membrane to the flexible electrode.

Claim 35 (New): The method as claimed in claim 34, wherein the membrane acts as, or is, a membrane of a mirror or wave front corrector.

Claim 36 (New): An operating method for a device as claimed in claim 20, in which:

a potential difference is applied between the flexible electrode and each of the first and second fixed electrodes respectively, the potential difference generating an attractive electrostatic force between the two electrodes of each couple of electrodes of the mobile electrode and each respective fixed electrode, such that:

the means for forming two pivots includes support points for the mobile structure, when the mobile structure is attracted by one and/or the other of the fixed electrodes, a central part of the flexible electrode, or a part of the flexible electrode located between the means for forming two pivots, moving, or rising and moving down, under an effect of mechanical forces, while lateral parts are subject to electrostatic forces.

Claim 37 (New): The method as claimed in claim 36, in which:

if the potential difference between the first fixed electrode and the mobile electrode is decreased, and if the potential difference between the second fixed electrode and the mobile electrode is increased, the mobile structure tips gradually towards the first fixed electrode,

if the potential difference between the first fixed electrode and the mobile electrode is increased, and if the potential difference between the second fixed electrode and the mobile electrode is decreased, the mobile structure tips gradually towards the second fixed electrode,

if the potential difference between the first fixed electrode and the mobile electrode is decreased, and if at a same time the potential difference between the second fixed electrode and the mobile electrode is decreased, the mobile structure moves down to the substrate, along an axis,

if the potential difference between the first fixed electrode and the mobile electrode is increased, and if at a same time the potential difference between the second fixed electrode and the mobile electrode is increased, the mobile structure rises by moving away from the substrate, along the axis.

Claim 38 (New): An operating method for a device as claimed in claim 20, in which:
a potential difference is applied between the mobile electrode and each of the first and second fixed electrodes respectively, the potential difference generating an attractive electrostatic force between the two electrodes of each couple of electrodes of the mobile electrode and each respective fixed electrode, such that:

if the potential difference between the first fixed electrode and the mobile electrode is decreased, and if the potential difference between the second fixed electrode and the mobile electrode is increased, the mobile structure tips gradually towards the first fixed electrode,

if the potential difference between the first fixed electrode and the mobile electrode is increased, and if the potential difference between the second fixed electrode and the mobile electrode is decreased, the mobile structure tips gradually towards the second fixed electrode,

if the potential difference between the first fixed electrode and the mobile electrode is decreased, and if at a same time the potential difference between the second fixed electrode and the mobile electrode is decreased, the mobile structure descends to the substrate, along an axis,

if the potential difference between the first fixed electrode and the mobile electrode is increased, and if at a same time the potential difference between the second fixed electrode and the mobile electrode is increased, the mobile structure rises by moving away from the substrate, along the axis.

Claim 39 (New): An electrostatic actuation device, comprising:
a flexible electrode, having a first and a second end, at least part of the flexible electrode being mobile, or forming a mobile structure, relative to a substrate, according to at least a direction perpendicular to the substrate;

first and second fixed electrodes, fixed relative to the substrate; and

means fixed relative to the substrate, for forming two pivots of the flexible electrode, located between the first and second ends of the flexible electrode, each fixed electrode being located, while the device is operating, opposite a section of the flexible electrode located between one of the means for forming two pivots and the end of the flexible electrode closest to the means for forming two pivots.

Claim 40 (New): The device as claimed in claim 28, wherein a load is placed on or fixed to the flexible electrode, between its first and second ends or between the means for forming two pivots.

Claim 41 (New): The device as claimed in claim 39, wherein an insulating layer is formed on the substrate and/or the flexible electrode.

Claim 42 (New): The device as claimed in claim 39, wherein said means for forming two pivots comprises at least one arm positioned laterally relative to the flexible electrode, or two arms positioned on either side of the flexible electrode.